

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of controlling a storage system having primary storage volumes and replication storage volumes which replication storage volumes improve reliability of the storage system, the method comprising:

determining a boundary of a potential failure of the primary storage volumes and the replication storage volumes; and

using the determined boundary to assign replication storage volumes to assure that at least some of the replication storage volumes are outside the failure boundary,

wherein the primary storage volumes and replication storage volumes are horizontally or are vertically addressed.

2. (Original) A method as in claim 1 wherein the potential failure boundary is determined by software managing the storage system.

3. (Original) A method as in claim 2 wherein a logical address of locations in the storage system is used to determine the failure boundary.

4. (Original) A method as in claim 1 wherein there are a plurality of failure boundaries and each is determined by software managing the storage system.

5. (Original) A method as in claim 4 wherein information regarding the failure boundaries is stored in a server.

6. (Original) A method as in claim 5 wherein the information regarding the failure boundaries is stored as a table in the server.

7. (Original) A method as in claim 5 wherein information regarding the failure boundaries also includes information about reliability of the primary storage volumes and the replication storage volumes.

8. (Original) A method as in claim 1 wherein the boundary of the potential failure is used to assign storage volumes as replication storage volumes for a particular operation of the storage system.

9. (Currently Amended) A method as in claim 8 wherein ~~the failure boundary information~~ information relating to the boundary of potential failure includes error correction group and controller group information for each of the primary storage volumes and the replication storage volumes.

10. (Currently Amended) A storage system comprising:
a set of primary storage volumes;
a set of replication storage volumes for improving reliability of the storage system;
a memory for storing information regarding at least one boundary of a potential failure of the primary storage volumes and the replication storage volumes, the at least one boundary being determined using error correction group and controller group information for the set of primary storage volumes and the set of replication storage volumes;
and
a controller coupled to the memory for assigning replication storage volumes to assure that at least some of the replication storage volumes are outside the failure boundary.

11. (Original) A storage system as in claim 10 wherein the memory storing information regarding the at least one boundary of a potential failure is in a server and the server is used to manage the storage system.

12. (Original) A storage system as in claim 11 wherein the information regarding the failure boundaries is stored as a table.

13. (Original) A storage system as in claim 11 wherein information regarding the failure boundaries also includes information about reliability of the primary and replication storage volumes.

14. (Original) A storage system as in claim 11 wherein information regarding the failure boundaries also includes information about performance of the primary and replication storage volumes.

15. (New) A method as in claim 1 wherein the boundary of a potential failure is determined based on logical addresses.

16. (New) A method as in claim 15 wherein the logical addresses correspond to volume numbers or error correction groups.

17. (New) A method as in claim 1 further comprising:
performing a replication process between the primary replication volumes and secondary storage volumes, the replication process utilizing a daily or hybrid backup implementation.

18. (New) A storage system as in claim 10 wherein the at least one boundary of potential failure is determined based on logical addresses.

19. (New) A storage system as in claim 18 wherein the logical addresses correspond to volume numbers or error correction groups.

20. (New) A storage system as in claim 10 wherein the controller further performs a replication process between the primary replication volumes and secondary storage volumes, the replication process utilizing a daily or hybrid backup implementation.